

Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 1 of 11

# Agro-meteorological Bulletin and Assessment for Farmers and Livestock Producers of Trinidad and Tobago for the First 15-Day Period $(16^{th}-31^{st})$ of December, 2024

Warm To Very Warm Conditions with Near Normal Rainfall Amounts Expected During The Fifteen Days.

Issue date: 16th December 2024

### Definitions used in the forecast and bulletin

Term	Meaning
Rain Day	A day with 1.0 mm or more of rainfall amount
Wet Day	A day with 10.0 mm or more of rainfall amount
Extremely Wet Day	A day with 25.0 mm or more of rainfall amount
Normal Rainfall	Between 75% and 125 % of the average
Below Normal Rainfall	Rainfall below 75% of the average
Above Normal Rainfall	Rainfall in excess of 125 % of the average
Much below Normal Rainfall	Rainfall below 50% of the average
Much above Normal Rainfall	Rainfall above 150% of the average
Scanty Rainfall	Less than 1 mm
Moderate Rainfall	1-10 mm
Heavy Rainfall	10-50 mm
Very heavy Rainfall	Greater than 50 mm
Probability of 1-30 %	Low Chance
Probability of 30-70 %	Moderate Chance
Probability greater than 70%	High Chance

Term	Amount of Rain	Type of day
Scanty Rainfall	Less than 1 mm	Relatively dry day
Moderate Rainfall	1-10 mm	Relatively wet day
Heavy Rainfall	10-50 mm	Wet day
Very heavy Rainfall	Greater than 50 mm	Excessively wet day



Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 2 of 11

### Weather Assessment for the period December 1st to 15th 2024.

The first half of December was drier and hotter than usual as both islands experienced below normal rainfall. One (1) wet day in Tobago resulted in the 15-day rainfall amount at Crown Point of 32.3 mm. For Trinidad, central and south areas in particular experienced less rainfall than usual despite moderate to heavy showers. Two (2) wet days at Piarco resulted in a 15-day rainfall amount of 65.2 mm. The rainfall totals maps for the period 1<sup>st</sup> to 15<sup>th</sup> of December for Trinidad and Tobago are located below as figure 1 and figure 2.

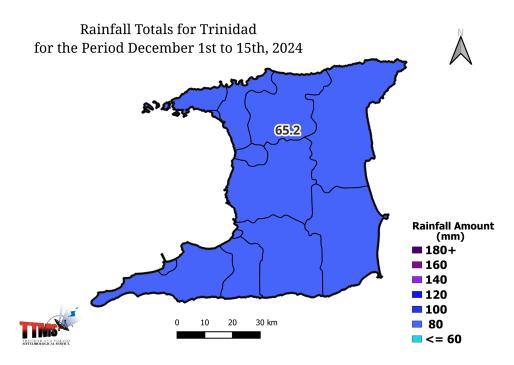


Figure 1. Rainfall map of Trinidad showing measured rainfall totals for varying districts during the period 1<sup>st</sup> to 15<sup>th</sup> of December.



Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 3 of 11

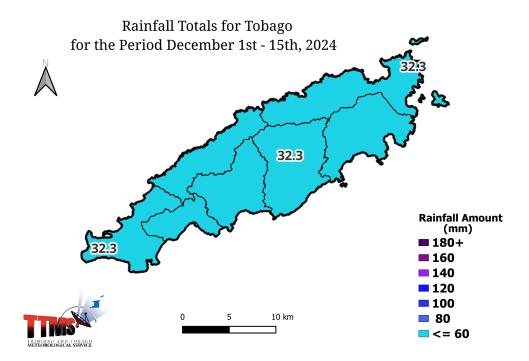


Figure 2. Rainfall map of Tobago showing measured rainfall totals for varying districts during the period 1<sup>st</sup> to 15<sup>th</sup> of December.

### **Temperatures:**

Warm to very warm conditions dominated the first half of the month in Trinidad. From the 1<sup>st</sup> to the 15<sup>th</sup> December Piarco observed a maximum daytime temperature of 32.5 °C (12<sup>th</sup>) with no hot days (maximum temperatures over 34.0 °C at Piarco). The minimum night-time temperatures ranged from 22.0 °C to 24.3 °C at Piarco. Tobago also experienced very warm conditions with a maximum daytime temperature of 31.6 °C (7<sup>th</sup>) with no hot days (maximum temperatures above 33.0 °C at Crown Point). The minimum night-time temperatures ranged from 23.5 °C to 26.6 °C at Crown Point. Factoring the relative humidity however, these temperatures had a 'real feel' that was higher than the observed temperature.



Telephone: 1-868-669-4392 ext. 120/121 | Fax:

1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 4 of 11

## **Agro-meteorological Forecast:**

Date	Weather			Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
16 <sup>th</sup>	70% chance of showers	4-6 mm of rainfall is possible	Partly cloudy,breezy, showery isolated thunderstorm	Warm  Max/Min Temperature 31.0 °C /24.0 °C	Feels like 36- 26°C	71 - 84%	Easterly 20-39 km/h Gust 50 km/h
17 <sup>th</sup>	80% chance of showers	4-12 mm of rainfall is possible	Mostly cloudy, breezy, isolated heavy shower/ thunderstorm	Warm  Max/Min Temperatures 31.0 °C /23.0 °C	Feels like 36-40°C	74 - 80 %	Easterly 20-39 km/h Gust 50 km/h
18 <sup>th</sup>	80% chance of showers	4-12 mm of rainfall is possible	Mostly cloudy, breezy, isolated heavy shower/ thunderstorm	Warm  Max/Min Temperatures 31.0 °C /23.0 °C	Feels like 36-44 °C	77 - 88%	Easterly 20 - 30 km/h Gust 50 km/h
19 <sup>th</sup>	70% chance of showers	4-12 mm of rainfall is possible	Mostly cloudy, breezy, isolated heavy shower/ thunderstorm	Warm  Max/Min Temperatures 30.0 °C /23.0 °C	Feels like 35-40 ℃	77 - 88%	Easterly 20 - 30 km/h Gust 50 km/h

## Disclaimer

This information is provided with the understanding that the Trinidad and Tobago Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the forecast or outlook contained in this document. The information may be used freely by the public with appropriate acknowledgement of its source, but shall not be modified in content and then presented as original material. This product can also be accessed on the Trinidad and Tobago Meteorological Service website (<a href="http://www.metoffice.gov.tt">http://www.metoffice.gov.tt</a> ). Any comments regarding this product are welcomed and can be sent via the <a href="metfeedback@gov.tt">metfeedback@gov.tt</a> .



Telephone: 1-868-669-4392 ext. 120/121 | Fax:

1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 5 of 11

Date	Weather			Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
20 <sup>th</sup>	60% chance of showers	4-6 mm of rainfall is possible	Partly to mostly cloudy, breezy with showers.	Warm  Max/Min Temperatures 31.0 °C /24.0 °C	Feels like 36-44 °C	77 - 89%	Easterly 20 - 30 km/h Gust 50 km/h
21 <sup>st</sup>	70% chance of showers	4-6 mm of rainfall is possible	Partly to mostly cloudy, breezy, isolated heavy shower/ thunderstorm	Warm  Max/Min Temperatures 30.0 °C /24.0 °C	Feels like 35-40 °C	77 - 89%	Easterly 20 - 30 km/h Gust 50 km/h
22 <sup>nd</sup>	40% chance of showers	Less than 4 mm of rainfall is possible	Partly to mostly cloudy, breezy,with showers.	Warm  Max/Min Temperatures 32.0 °C /24.0 °C	Feels like 38-47°C	73 - 87%	Easterly 20 - 39 km/h Gust 50 km/h
23 <sup>rd</sup>	40% chance of showers	Less than 4 mm of rainfall is possible	Partly to mostly cloudy, breezy,with showers.	Warm  Max/Min Temperatures 32.0 °C /24.0 °C	Feels like 38-47°C	69 - 86%	Easterly 20 - 39 km/h Gust 50 km/h



Telephone: 1-868-669-4392 ext. 120/121 | Fax:

1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 6 of 11

Date	Weather			Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
24 <sup>th</sup>	40% chance of showers	Less than 4 mm of rainfall is possible	Partly to mostly cloudy, with showers.	Warm  Max/Min Temperatures 32.0 °C /23.0 °C	Feels like 37-43°C	69 - 76%	Easterly 7 - 19 km/h Gust 30 km/h
25 <sup>th</sup>	40% chance of showers	Less than 4 mm of rainfall is possible	Partly to mostly cloudy, with showers.	Warm  Max/Min Temperatures 32.0 °C /23.0 °C	Feels like 37-46°C	74 - 85%	Easterly 7 - 19 km/h Gust 30 km/h
26 <sup>th</sup>	40% chance of showers	Less than 4 mm of rainfall is possible	Partly to mostly cloudy, with showers.	Warm  Max/Min Temperatures 32.0 °C /22.0 °C	Feels like 36-42°C	63 - 74%	Easterly 7 - 19 km/h Gust 30 km/h
27 <sup>th</sup>	40% chance of showers	Less than 4 mm of rainfall is possible	Partly to mostly cloudy, with showers.	Warm  Max/Min Temperatures 32.0 °C /22.0 °C	Feels like 36-43°C	63 - 77%	Northeasterly 7 - 19 km/h Gust 30 km/h



Telephone: 1-868-669-4392 ext. 120/121 | Fax:

1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 7 of 11

Date	Weather			Temperature	Heat 'Real Feel'	Day Moisture (Relative Humidity)	Wind
28 <sup>th</sup>	70% chance of showers	4-6 mm of rainfall is possible	Partly to mostly cloudy, with showers.	Warm  Max/Min Temperatures 32.0 °C /23.0 °C	Feels like 37-47°C	78 - 86%	Northeasterly 7 - 19 km/h Gust 30 km/h
29 <sup>th</sup>	70% chance of showers	6-12 mm of rainfall is possible	Partly to mostly cloudy, isolated heavy showers.	Warm  Max/Min Temperatures 32.0 °C /22.0 °C	Feels like 36-42°C	65 - 75%	Easterly 7 - 19 km/h Gust 30 km/h
30 <sup>th</sup>	70% chance of showers	6-12 mm of rainfall is possible	Partly to mostly cloudy, breezy, isolated heavy showers.	Warm  Max/Min Temperatures 31.0 °C /23.0 °C	Feels like 36-43°C	79 - 86%	Easterly 20 - 39 km/h Gust 50 km/h
31 <sup>st</sup>	70% chance of showers	6-12 mm of rainfall is possible	Partly to mostly cloudy, breezy, isolated heavy shower/ thunderstorm	Warm  Max/Min Temperatures 31.0 °C /23.0 °C	Feels like 36-44°C	81 - 88%	Easterly 20 - 39 km/h Gust 50 km/h



Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 8 of 11

Trinidad Rainfall Forecast for the 15-Day period of December (16<sup>th</sup> – 31<sup>st</sup>) 2024.

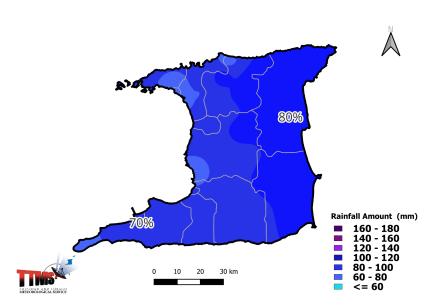


Figure 1. Rainfall map of Trinidad showing expected mean rainfall totals for districts across Trinidad during the 15-day period ( $16^{th} - 31^{st}$ ) December 2024 and percentage probability of occurrence.

Eastern and North-Eastern areas: Moderate chance (80%) of mean daily rainfall up to 7.4 mm.

**South-Eastern areas:** Moderate chance (80%) of mean daily rainfall up to 7.3 mm.

**Southern areas:** Moderate chance (70%) of mean daily rainfall up to 5.9 mm.

**South-Western areas:** Moderate chance (70%) of mean daily rainfall up to 5.8 mm.

Central, West-Central, and inland areas: Moderate chance (70%) of mean daily rainfall up to 5.8 mm.

Northern, North-Western areas: Moderate chance (70%) of mean daily rainfall up to 5.6 mm.



Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 9 of 11

Tobago Rainfall Forecast for the 15-Day period of December (16<sup>th</sup> – 31<sup>st</sup>) 2024.

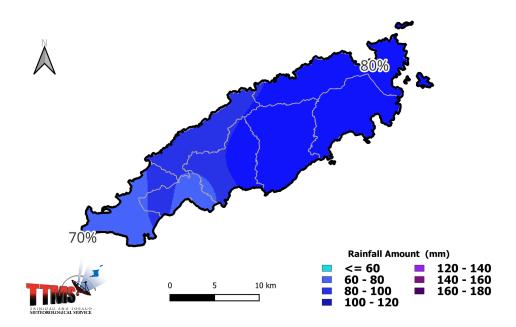


Figure 2. Rainfall map of Tobago showing expected mean rainfall totals for districts across Tobago during the 15-day period ( $16^{th} - 31^{st}$ ) December and percentage probability of occurrence.

North-Eastern areas: Moderate chance (80%) of mean daily rainfall up to 7.0 mm.

South-Western areas: Moderate chance (70%) of mean daily rainfall up to 5.4 mm.



Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 10 of 11

### **Trinidad and Tobago:**

The outlook for the second half of December calls for near normal rainfall amounts. During the  $16^{th}-31^{st}$  of December, wet days with the daily rainfall totals forecast above 10 mm are expected:  $17^{th}-19^{th}$  and  $29^{th}-31^{st}$ . Relatively wet days with moderate rainfall of 1-10 mm are expected for the remainder of the period. Isolated heavy rainfall and thunderstorms during wet days may result in flash flooding, ponding, gusty winds and soggy soils.

In Trinidad, the 15-day period forecast rainfall totals are expected to range between 70 mm and 120 mm across different farmlands favouring eastern and northeastern areas of Trinidad: Valencia, Sangre Grande, Mayaro, Guayaguayare. In Tobago, 15-day forecast rainfall is likely to range between 75 mm and 110 mm across most farmlands, favouring central and northeastern areas: Hillsborough, Roxborough, Delaford.

### **Temperatures & Winds:**

Warm to very warm conditions continue 16<sup>th</sup> to 31<sup>st</sup> December with a high (80%) chance daytime and nighttime temperatures will be above normal. Forecast daily maximum temperatures will range from 30 °C to 32 °C. Factoring humidity on the hottest days, these temperatures are expected to feel as hot as 35 °C to 47 °C. The minimum temperatures will range from 22.0 °C to 26.0 °C during most nights/early mornings, though lower (20 °C) in hilly areas and sheltered valleys.

Breezy conditions continue with a high (70%) chance of moderate to fresh northeasterly to easterly winds of 20–39 km/h. Strong gusts are possible near heavy showers/thunderstorms. Warm, breezy conditions will sustain average evapotranspiration rates in crops between 4.0 to 9.0 mm per day.

#### **Moisture levels:**

Over the fifteen-day period across Trinidad and Tobago, expect moderate moisture levels with average daytime relative humidity values mainly from the mid-60s to upper 70s, in terms of percentage.



Telephone: 1-868-669-4392 ext. 120/121 | Fax: 1-868-669-4727

Email: synop@metoffice.gov.tt Website: www.metoffice.gov.tt

F 750.04.05 Page 11 of 11

### **Highlighted Possible Impacts on Agriculture:**

Spells of mainly light to moderate showers with occasional heavy showers and isolated thunderstorms will interrupt breezy and warm conditions. So opportunities for water harvesting exist. Soil moisture loss should lessen due to less evaporative stress, however scheduling of irrigation days on fields to maintain optimal soil moisture will likely remain necessary on warm, breezy days. There is a moderate (60%) chance of heat stress in young livestock, newly germinated and transplanted seedlings onto fields. There is a high probability (70%) that strong winds may cause physical damage to young plants and flowering mature plants in exposed hilly areas. There is a moderate probability (40%) chance for fungal spread, insect pests and warm/moist weather diseases to develop in crop beds.

## Sun and Moon Positions in the Sky December (16<sup>th</sup> - 31<sup>st</sup>) 2024.

The sun is presently 23.4° (degrees) South of the Equator and the day-length or number of sunlight hours in Trinidad and Tobago on December 16<sup>th</sup> will be 11 hours, 30 minutes and 23 seconds decreasing to 11 hours, 30 minutes 57 seconds on December 31<sup>st</sup>.

Moon Phases during December: Third Quarter,  $22^{nd}$ ; New Moon,  $30^{th}$ . According to the tradition of moon's phases: December  $15^{th} - 16^{th}$ ,  $22^{nd} - 26^{th}$  are good days for planting below-ground crops;  $30^{th} - 31^{st}$  are good days for planting above-ground; the remaining days are poor planting days and are useful for removing weeds, clearing land and ploughing fields.

### **Summary of Expected conditions:**

### Warm to very warm conditions and near normal rainfall are possible during the fifteen days.

During the  $16^{th}-31^{st}$  of December, wet days with the daily rainfall totals forecast above 10 mm are expected:  $17^{th}-19^{th}$  and  $29^{th}-31^{st}$ . Relatively wet days with moderate rainfall of 1-10 mm are expected for the remainder of the period. Isolated heavy rainfall and thunderstorms during wet days may result in flash flooding, ponding, gusty winds and soggy soils. The lower temperatures expected during  $16^{th}-31^{st}$  December are likely to remain above average for the time of year. Towards the end of December/early January, wetter than usual conditions are possible due to a moderate (57%) chance of La Niña emerging.